Preliminary

Operator's Manual

April 8, 1957

THE FORTRAN
AUTOMATIC CODING SYSTEM
FOR THE
IBM 704 EDPM

This manual describes the use of FORTRAN 4-1-4-1.

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PREPARING THE SYSTEM TAPE

Set the tape which is to become the FORTRAN System tape to logical 1, and load the system deck, the librarian, and the library routines at the 704 card reader. When the cards have gone in (correct final stop is 77777_8) the system tape will have been written and is ready for use. The system tape should be File Protected.

(If later it is desired to change the library functions, the system itself need not be rewritten. Simply load the librarian followed by whatever functions the system tape is to have. Further details are given below in the section on Library Functions.)

Error Stops:	27_8	Card check sum error.
	45_8	Librarian failed to find correct end of permanent library.
	152_8	Card check sum error.

USING THE SYSTEM TAPE

Set the system tape to logical 1, and set two machine tapes to logical 3 and 4. If operating with off-line input, set the input tape (bearing the source program as the first file) to logical 2; otherwise set a machine tape to logical 2.

At the 704 card reader load the one-card FORTRAN system caller FNSC1, followed (if the input is on-line) by the source program deck. Do not use extra blank cards.

(If tape 1 is known to be rewound, FNSC1 is not necessary. With off-line input, simply press LOAD TAPE and when the card reader is selected, press START on the card reader. With on-line input, ready the source program in the card reader and press LOAD TAPE.)

Place the SHARE printer board #2 in the 704 printer.

Set the sense switches as follows:

Switch 1	UP to obtain the object program as a binary tape (Tape 4) and as a deck of binary cards.

DOWN to obtain binary tape (Tape 4) only.

Switch 2 — UP to produce on Tape 2 two files containing respectively the source program and a map of object program storage.

DOWN to add a third file to Tape 2, containing the object program in the language of the forthcoming modified SHARE symbolic assembly program.

Switch 3 — DOWN to list on-line the first two or three files of Tape 2, depending upon whether switch 2 is UP or DOWN.

Switch 4 — UP or DOWN to cause on-line listing to be single or double spaced.

The program ends by executing a load button sequence to the card reader. If the card reader is not ready, the machine will hang up at location 77775_8; if it is ready but empty the machine will stop at 77777_8.

ERROR DETECTION

The FORTRAN system has provision for detecting a large number of source program and machine errors. On the final pages of this manual is a list of such errors, together with a brief characterization of the probable trouble and the recommended procedure.

Most of the detection of errors in the source program occurs in Section 1 of the system. For this reason, Section 1 has been equipped with an automatic diagnostic system which, instead of causing a stop, prints on-line the appropriate information about the trouble and then permits Section 1 to resume processing with the next source statement. Detection of an error covered by the diagnostic system does, however, prevent processing beyond Section 1; when such an error has occurred Section 1 ends with a stop at 77777_8 and processing cannot be continued.

The errors covered by the diagnostic system are flagged with an asterisk in the list at the end of this manual.

RUNNING THE OBJECT PROGRAM

The binary deck which is produced when switch 1 is UP consists of the object program in relocatable binary, together with the four-card FORTRAN relocating loader UA CSB3 and appropriate control card and transfer card. The binary deck is thus ready for immediate loading and execution. For further details see the forthcoming SHARE write-up for UA CSB3.

Details about using the binary tape form of the object program will be announced later.

The printer board to be used with FORTRAN object program is SHARE #2.

ERROR STOPS IN OBJECT PROGRAM

There are 9 standard error stops in object level input-output routines. They are to be recognized not by looking at the instruction counter but by looking at the HPR instruction itself in the storage register.

HPR 0, 0	End of file in reading binary tape. Press START to resume reading next file.
HPR 0, 1	End of file in reading cards or BCD tape. Press START to resume reading next file.
HPR 1, 1 HPR 2, 1 HPR 3, 1 HPR 4, 1	Inappropriate character encountered in a data field in reading cards or BCD tape. Pressing START causes that character to be treated as a zero.
HPR 0, 2	Non-Hollerith character encountered in reading card. Correct card, ready in card reader, and press START.
HPR 0, 3	Redundancy check in reading BCD tape. Press START to accept information read.
HPR 0, 4	Echo check in printing. Press START to continue. Press RESET and START to repeat line and continue.

MAINTAINING THE LIBRARY FUNCTIONS

Additions, deletions, and changes in the list of library functions can be made by means of the FORTRAN librarian FNLIB1. Each time it is used it rewrites completely the list of functions; hence it should be followed by all the routines which the system is desired to contain.

Each routine consists of one or more control cards, followed by the routine proper on relocatable binary cards. The routine proper must meet the specifications given on page 40 of the FORTRAN Programmer's Reference Manual.

The control cards are punched as if for loading by NYBL1. The loading address (9L address) must be zero, and the check sum must be given. The first control card has in its 8L address the number of locations occupied by the soubroutine, and in its 8R address the 2's complement of n, where n is the length of the common storage region used by the routine. Succeeding rows have in the left word a function name (without the terminal F) followed if there is room by a blank character and zeroes in internal 704 BCD with the significant characters packed to the left, and in the address of the right word the corresponding entry point into the routine, relative to zero. For example, the control card for the UA S+C1 routine, which can calculate either cosine or sine by entering at relocatable 0 or 1, has COSb00 and 0 in its 7's row and SINb00 and 1 in its 6's row. If there are too many function names to fit on a single control card, they may be continued on additional control cards. On these additional cards do not repeat the information given in the 8's row of the first control card.

Any entry point which will cause the specifications for a library routine to be met can be given a function name (or several names if desired). Such names can be distinguished as <u>primary</u> or <u>secondary</u> names by not prefixing, or prefixing, the entry point with a minus sign (punch in column 37 of the appropriate row of the control card). The meaning of primary and secondary names arises out of the following rule of precedence which is used by the FORTRAN system in compiling library routines into the object program.

RULE. When a function is mentioned in a source program, the routine which will be used is the first routine on the system tape which meets either of the following conditions: (1) the name mentioned is a primary name of the routine; or (2) the name mentioned is a secondary name of the routine, and at least one of the primary names of the routine is also mentioned. (If no such routine exists, the universal empty routine HTR 1,4 is compiled.)

If the system tape is arranged with the routines which have many secondary names preceding the routines with few or none, this rule will prevent unnecessary duplication of routines in the object program. Suppose for example that the system tape contains an arc sine routine which also has an entry point which will compute a square root, and that this routine is given two names, ASINF (primary) and SQRTF (secondary). Suppose also that later on the tape is an ordinary square root routine with the single name SQRTF (primary). Then a source program which asks for both ASINF and SQRTF will cause compilation of the former program only.

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
27	MACHINE ERROR	PRESS START TO TRY AGAIN	TAPE 1 (SYSTEM TAPE) MAL-FUNCTIONING	TAPE TO CORE STORAGE TO TAPE LOADER
36	MACHINE ERROR	PRESS START TO TRY AGAIN	TAPE 4 MALFUNCTIONING	II
41	MACHINE ERROR-DRUM READ	START TO READ DRUM 3 MORE TIMES	CHECK SUM STOP IN READING DRUM 3	III-3
46	MACHINE ERROR-TAPE POSITION-ING	GET OFF MACHINE	TAPE 2 NOT POSITIONED PRO-PERLY	III-1
47	MACHINE ERROR-DRUM READ	START TO READ DRUM 3 MORE TIMES	CHECK SUM STOP IN READING DRUM 3	III-2
55	MACHINE ERROR-TAPE POSITION-ING	GET OFF MACHINE	ILLEGAL END OF FILE ON TAPE 2	III-1
62	MACHINE ERROR	PRESS START TO TRY AGAIN	TAPE 3 MALFUNCTIONING	II
63	MACHINE ERROR	PRESS START TO TRY AGAIN	TAPE 3 MALFUNCTIONING	II
64	MACHINE ERROR-TAPE CHECK	START TO READ 3 MORE TIMES	ERROR IN READING TAPE 2	III-1
65	MACHINE ERROR	PRESS START TO REREAD	ERROR READING FROM DRUM 1	IV-5
66	MACHINE ERROR	PRESS START TO TRY AGAIN	TAPE 3 MALFUNCTIONING	II
66	MACHINE ERROR	PRESS START OR GET OFF	TAPE CHECK, TAPE 2	II
67	MACHINE ERROR	PRESS START TO TRY AGAIN	TAPE 3 MALFUNCTIONING	II
72	MACHINE ERROR	PRESS START TO TRY AGAIN	TAPE 3 MALFUNCTIONING	II
72	MACHINE ERROR-DRUM READ	START TO READ DRUM 3 MORE TIMES	CHECK SUM STOP IN READING DRUM 3	III-3

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
72	MACHINE ERROR	GET OFF MACHINE	TAPE CHECK ON TAPE 2	I PRIME
73	MACHINE ERROR	PRESS START TO TRY AGAIN	TAPE 3 MALFUNCTIONING	II
106	SOURCE PROGRAM	GET OFF MACHINE	BUFFER STORAGE NOR HAS BEEN EXCEEDED-THIS MEANS THAT ONE OF THE DO NESTS IN THE SOURCE PROGRAM MUST BE RE-PLANNED	II
107	MACHINE ERROR-DRUM READ	START TO READ DRUM 3 MORE TIMES	CHECK SUM STOP IN READING DRUM 3	III-2
116	MACHINE ERROR	RESTART OR PRESS START TO PASS OVER ERROR	TAPE 3 MALFUNCTIONING (TAPE CHECK)	II
117	MACHINE ERROR	PRESS START TO REREAD	ERROR READING FROM DRUM 2	IV-3
123	MACHINE ERROR	PRESS START TO TRY AGAIN	TAPE 3 MALFUNCTIONING	II
124	MACHINE ERROR	PRESS START TO TRY AGAIN	TAPE 3 MALFUNCTIONING	II
125	MACHINE ERROR-DRUM READING ERROR	START TO READ DRUM 3 MORE TIMES	CHECK SUM STOP IN READING DRUM 3	III-1
125	MACHINE ERROR	GET OFF MACHINE	IMPOSSIBLE DIVIDE CHECK	V-1
130	MACHINE ERROR	PRESS START OR GET OFF	DRUM CHECK SUM STOP, DRUM 2	II
132	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-3
132	MACHINE ERROR	RESTART OR PRESS START TO PASS OVER ERROR	TAPE 3 MALFUNCTIONING (TAPE CHECK)	II
142	SOURCE PROGRAM	GET OFF MACHINE	AN IF STATEMENT, AN UNCONDITIONAL GO TO STATEMENT OR AN ASSIGN STATEMENT CONTAINS A STATEMENT NUMBER WHICH DOES NOT APPEAR IN COLUMNS 1 TO 5	I PRIME

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
			IN SOURCE PROGRAM	
146	MACHINE ERROR-DRUM READING ERROR	START TO READ DRUM 3 MORE TIMES	CHECK SUM, STOP IN READING DRUM 3	III-1
146	PROBABLE SOURCE PROGRAM ERROR	PRESS START TO TRY AGAIN, THEN GET OFF	THIS IS A DRUM CHECK SUM ERROR. HOWEVER IT IS USUSUALLY CAUSED NOT BY MACHINE ERROR BUT BY SOME KIND OF FAULTY FLOW IN THE SOURCE PROGRAM.	V-1
147	SOURCE PROGRAM	REMOVE THE UNREAD CARDS FROM THE HOPPER, RUN OUT THE CARDS REMAINING IN THE FEED AND INSPECT THE THIRD CARD FROM THE END FOR NON-HOLLERITH CHARACTERS. WHEN THE ERROR HAS BEEN CORRECTED, READY THE CORRECTED CARD AND THE REMAINING UNREAD CARDS IN THE CARD READER AND PRESS START BUTTON.	IMPOSSIBLE CHARACTER PUNCHED ON INPUT CARD	I
166	SOURCE PROGRAM	GET OFF MACHINE	AN IF STATEMENT, AN UNCONDITIONAL GO TO STATEMENT OR AN ASSIGN STATEMENT CONTAINS A STATEMENT NUMBER WHICH DOES NOT APPEAR IN COLUMNS 1 TO 5 IN SOURCE PROGRAM	I PRIME
170	MACHINE ERROR	GET OFF MACHINE	IMPOSSIBLE DIVIDE CHECK	V-1
173	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 3	III-3
176	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM FROM DRUM 3	VI

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
176	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM FROM DRUM 4	VI
201	MACHINE ERROR	RECOMPILE	ERROR CREATING PROBABILITY	IV-3
202	MACHINE ERROR	START TO TRY AGAIN	TAPE 3 READ INCORRECTLY 7 TIMES	VI
203	SOURCE PROGRAM	GET OFF MACHINE	AN IF STATEMENT, AN UNCONDITIONAL GO TO STATEMENT OR AN ASSIGN STATEMENT CONTAINS A STATEMENT NUMBER WHICH DOES NOT APPEAR IN COLUMNS 1 TO 5 IN SOURCE PROGRAM	I PRIME
203	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM READ FROM DRUM 2	VI
204	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM READ FROM DRUM 3	VI
204	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM FROM DRUM 2	VI
213	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM FROM DRUM 4	VI
215	MACHINE ERROR	PRESS START OR GET OFF	DRUM CHECK SUM STOP, DRUM 3	II
217	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM FROM DRUM 3	VI
220	SOURCE PROGRAM	GET OFF MACHINE	AN IF STATEMENT, AN UNCONDITIONAL GO TO STATEMENT OR AN ASSIGN STATEMENT CONTAINS A STATEMENT NUMBER WHICH DOES NOT APPEAR IN COLUMNS 1 TO 5 IN SOURCE PROGRAM	I PRIME
221	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM READ FROM DRUM 3	VI
223	MACHINE ERROR	START TO TRY AGAIN	FALSE END OF FILE SKIP FROM TAPE 4	VI
224	MACHINE ERROR	START TO IGNORE	FORTRAN FUNCTION NAME LOST FROM TABLE	VI
224	MACHINE ERROR	START TO	BAD CHECK SUM READ FROM	VI

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
		TRY AGAIN	DRUM 2	
225	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM FROM DRUM 2	VI
227	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 3	III-3
230	MACHINE ERROR	START TO TRY AGAIN	TAPE 3 READ INCORRECTLY 7 TIMES	VI
233	MACHINE ERROR	START TO TRY AGAIN	FALSE END OF RECORD SKIP FROM TAPE 1	VI
235	MACHINE ERROR	PRESS START TO REREAD	ERROR READING DRUM 3	IV-3
235	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM READ FROM DRUM 1	VI
244	MACHINE ERROR	GET OFF MACHINE	ERROR IN READING DRUM. DISPLAY LOCATION (2048. ADDRESS FIELD CONTAINS OCTAL DRUM ADDRESS. COMPUTED CHECK SUM IS IN ACCUMULATOR. READ IN CHECK SUM IS IN LOCATION (6278	I
245	MACHINE ERROR	START TO TRY AGAIN	FALSE END OF FILE SKIP FROM TAPE 1	VI
246	MACHINE ERROR	GET OFF MACHINE	ERROR IN READING DRUM. DISPLAY LOCATION (2048. ADDRESS FIELD CONTAINS OCTAL DRUM ADDRESS. COMPUTED CHECK SUM IS IN ACCUMULATOR. READ IN CHECK SUM IS IN LOCATION (6278	I
246	POSSIBLE MACHINE ERROR	START TO TRY AGAIN	RECORD IN LIBRARY IS TOO LONG	VI
247	SOURCE PROGRAM	GET OFF MACHINE	AN IF STATEMENT, AN UNCONDITIONAL GO TO STATEMENT OR AN ASSIGN STATEMENT CONTAINS A STATEMENT NUMBER WHICH DOES NOT APPEAR IN COLUMNS 1 TO 5 IN SOURCE PROGRAM	I PRIME

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
252	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 3	III-3
253	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM READ FROM DRUM 3	VI
254	POSSIBLE MACHINE ERROR	START TO IGNORE	TABLE ENTRY LOST	VI
255	SOURCE ERROR-TABLE SIZE EXCEEDED	REPROGRAM PROBLEM	SIZE OF THE CHANGE TAG TABLE EXCEEDS 300 ENTRIES	III-1
255	MACHINE ERROR	START TO IGNORE	BAD CHECK SUM FROM TAPE 1	VI
256	MACHINE ERROR	START TO IGNORE	TAPE 4 READ INCORRECTLY 7 TIMES	VI
260	MACHINE ERROR	PRESS START TO REREAD	ERROR READING DRUM 3	IV-6
260	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM READ FROM DRUM 1	VI
261	POSSIBLE MACHINE ERROR	START TO IGNORE	TABLE ENTRY LOST	VI
262	POSSIBLE MACHINE ERROR	START TO TRY AGAIN	ILLEGAL LIBRARY RECORD FROM TAPE 1	VI
270	MACHINE ERROR	START TO TRY AGAIN	BAD CHECK SUM READ FROM DRUM 3	VI
272	MACHINE ERROR-DRUM READING ERROR	START TO READ DRUM 3 MORE TIMES	CHECK SUM STOP IN READING DRUM 1	III-1
273	SOURCE PROGRAM	GET OFF MACHINE	A COMPUTED GO TO STATEMENT OR AN ASSIGNED GO TO STATEMENT CONTAINS A STATEMENT NUMBER WHICH DOES NOT APPEAR IN COLS. 1 TO 5 IN SOURCE PROGRAM	I PRIME
305	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 3	III-3
305	MACHINE ERROR	PRESS START TO REREAD	ERROR READING TAPE 4	IV-6

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
306	SOURCE PROGRAM	GET OFF MACHINE	A COMPUTED GO TO STATEMENT OR AN ASSIGNED GO TO STATEMENT CONTAINS A STATEMENT NUMBER WHICH DOES NOT APPEAR IN COLS. 1 TO 5 IN SOURCE PROGRAM	I PRIME
310	MACHINE ERROR	PRESS START TO REREAD	ERROR READING DRUM 3	IV-3
312	POSSIBLE MACHINE ERROR	START TO IGNORE	TABLE ENTRY LOST	VI
314	MACHINE ERROR	START TO IGNORE	LIBRARY FUNCTION NAME LOST FROM TABLE	VI
321	MACHINE ERROR-DRUM READING ERROR	START TO READ DRUM 3 MORE TIMES	CHECK SUM STOP IN READING DRUM 1	III-1
327	MACHINE ERROR	GET OFF MACHINE	REDUNDANCY TAPE CHECK (TAPE 2) SECTION 5-3	V-3
331	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	TAPE 2 NOT POSITIONED PROPERLY	III-2
333	MACHINE ERROR	START TO IGNORE	INCONSISTENT TABLE ENTRY IN CORE	VI
334	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-3
336	MACHINE ERROR	GET OFF MACHINE	FALSE END OF FILE (TAPE 2) IN SECTION 5-3	V-3
340	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	ILLEGAL END OF FILE ON TAPE 2	III-2
346	MACHINE ERROR	PRESS START TO READ AGAIN	ERROR READING TAPE 4	IV-1
350	MACHINE ERROR-TAPE READ	START TO READ TAPE 3 MORE TIMES	ERROR IN READING TAPE 2	III-2
351	SOURCE PROGRAM	GET OFF MACHINE	A DO STATEMENT CONTAINS A STATEMENT NUMBER WHICH DOES NOT APPEAR IN COLUMNS 1 TO 5 IN SOURCE	I PRIME

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
			PROGRAM	
355	MACHINE ERROR	RECOMPILE	NO ENTRY IN TIFGO FOR ASSIGNED GO TO	IV-2
357	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	TAPE 2 NOT POSITIONED PROPERLY	III-2
357	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-3
357	SOURCE PROGRAM	GET OFF MACHINE	A DO STATEMENT CONTAINS A STATEMENT NUMBER WHICH DOES NOT APPEAR IN COLUMNS 1 TO 5 IN SOURCE PROGRAM	I PRIME
365	MACHINE ERROR	START TO IGNORE	LIBRARY FUNCTION NAME LOST FROM TABLE	VI
366	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	ILLEGAL END OF FILE ON TAPE 2	III-2
375	MACHINE ERROR-TAPE READ	START TO READ TAPE 3 MORE TIMES	ERROR IN READING TAPE 2	III-2
401	POSSIBLE MACHINE ERROR	START TO IGNORE	UNDEFINED SYNONYM	VI
410	MACHINE ERROR-TAPE READ	START TO READ TAPE 3 MORE TIMES	ERROR IN READING TAPE 4	III-2
412	SOURCE PROGRAM	GET OFF MACHINE	DISPLAY LOCATION (40518. THE NUMBER IN THE ADDRESS FIELD SHOULD APPEAR IN THE FOLLOWING TABLE ADDR MEANING 433 MORE THAN 100 DIFFERENT FIXED POINT CONSTANTS IN SOURCE PROGRAM. SEE P44, PAR2 OF FORTRAN MANUAL 442 MORE THAN 450 DIFFERENT FLOATING POINT CONSTANTS IN SOURCE PROGRAM. SEE	I

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
			P44, PAR3 OF FORTRAN MANUAL	
			451 MORE THAN 100 DIFFERENT ONE DIMENSIONAL SUBSCRIPT COMBINATIONS IN SOURCE PROGRAM. SEE P45, PAR17 OF FORTRAN MANUAL	
			460 MORE THAN 90 DIFFERENT TWO DIMENSIONAL SUBSCRIPT COMBINATIONS IN SOURCE PROGRAM. SEE P45, PAR17 OF FORTRAN MANUAL	
			467 MORE THAN 75 DIFFERENT THREE DIMENSIONAL SUBSCRIPT COMBINATIONS IN SOURCE PROGRAM. SEE P45, PAR17 OF FORTRAN MANUAL	
			476 SEE P45, PAR18 OF FORTRAN MANUAL. ONE DIMENSIONAL CASE EXCEEDED	
			505 SEE P45, PAR18 OF FORTRAN MANUAL. TWO DIMENSIONAL CASE EXCEEDED	
			514 SEE P45, PAR18 OF FORTRAN MANUAL. THREE DIMENSIONAL CASE EXCEEDED	
412	MACHINE ERROR	PRESS START TO REREAD	ERROR READING DRUM, PROBABLY 1 - DRUM NO. IN OCTAL IS ADDRESS PART OF 361	IV-3
415	MACHINE ERROR	START TO IGNORE	NEGATIVE BLOCK LENGTH COMPUTED	VI
416	SOURCE PROGRAM	GET OFF MACHINE	EQUIVALENCE STATEMENTS ARE INCONSISTENT	I PRIME
417	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	ILLEGAL END OF FILE ON TAPE 4	III-2
417	MACHINE ERROR-	GET OFF MACHINE	PROBABLE TAPE POSITIONING	III-3

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
	TAPE POSITIONING		ERROR ON TAPE 3	
425	MACHINE ERROR	RECOMPILE	IMPOSSIBLE DIVIDE CHECK	IV-6
427	MACHINE ERROR-TAPE READING	START TO READ TAPE 1 MORE TIME	ERROR IN READING TAPE 2	III-1
430	MACHINE ERROR-TAPE READ	START TO READ TAPE 3 MORE TIMES	ERROR IN READING TAPE 4	III-2
430	SOURCE PROGRAM	CORRECT SOURCE PROGRAM	PROGRAM TOO COMPLEX, SIMPLIFY OR DO IN 2 PARTS (TOO MANY BASIC BLOCKS)	IV-1
434	POSSIBLE MACHINE ERROR	START TO IGNORE	ILLEGAL LOCATION SYMBOL	VI
437	MACHINE ERROR-TAPE READING	START TO READ TAPE 1 MORE TIME	ERROR IN READING TAPE 4	III-1
437	MACHINE ERROR	PRESS START TO TRY AGAIN	REDUNDANCY TAPE CHECK (TAPE 3), SECTION 5-2	V-2
441	POSSIBLE MACHINE ERROR	START TO IGNORE	UNDEFINED SYNONYM	VI
442	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-3
446	MACHINE ERROR-TAPE READ	START TO READ TAPE 3 MORE TIMES	ERROR IN READING TAPE 4	III-2
451	MACHINE ERROR	RECOMPILE	IMPOSSIBLE END OF FILE ON TAPE 2	IV-1
455	SOURCE PROGRAM	CORRECT SOURCE PROGRAM	PROBABLY DUE TO A PART OF THE SOURCE PROGRAM WHICH HAS NO POSSIBLE PATH OF FLOW TO IT. ALSO MAY BE DUE TO DUPLICATED EXTERNAL FORMULA NUMBERS, DEFINITION OF A FORTRAN FUNCTION IN THE MIDDLE OF THE SOURCE PROGRAM, OR OTHER SOUCE PROGRAM ERRORS	IV-2

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
456	MACHINE ERROR	START TO TRY AGAIN	FALSE END OF RECORD SKIP FROM TAPE 1	VI
472	MACHINE ERROR	START TO TRY AGAIN	FALSE END OF FILE SKIP FROM TAPE 1	VI
473	POSSIBLE MACHINE ERROR	START TO TRY AGAIN	RECORD IN LIBRARY IS TOO LONG	VI
473	POSSIBLE MACHINE ERROR	START TO IGNORE	ILLEGAL LOCATION SYMBOL	VI
475	SOURCE PROGRAM	GET OFF MACHINE	A FREQUENCY STATEMENT CONTAINS A STATEMENT NUMBER WHICH DOES NOT APPEAR IN COLUMNS 1 TO 5 IN SOURCE PROGRAM	I PRIME
502	MACHINE ERROR	START TO IGNORE	BAD CHECK SUM FROM TAPE 1	VI
503	MACHINE ERROR	RECOMPILE	IMPOSSIBLE DIVIDE CHECK	IV-6
503	MACHINE ERROR	START TO IGNORE	INCONSISTENT DEFINITION	VI
504	MACHINE ERROR	PRESS START TO REREAD	ERROR - TAPE 2	IV-1
513	SOURCE PROGRAM	GET OFF MACHINE	A FREQUENCY STATEMENT CONTAINS A STATEMENT NUMBER WHICH DOES NOT APPEAR IN COLUMNS 1 TO 5 IN SOURCE PROGRAM	I PRIME
514	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 4	III-1
516	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-3
526	MACHINE ERROR	RECOMPILE	IMPOSSIBLE END OF FILE TAPE 2	IV-1
541	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 3	III-3
545	MACHINE ERROR	PRESS START TO REREAD	ERROR - TAPE 2	IV-1

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
555	MACHINE ERROR	START TO IGNORE	TAPE 3 READ INCORRECTLY 7 TIMES	VI
557	MACHINE ERROR	RECOMPILE	(TZE W/O TPL AND TRA)	IV-2
604	MACHINE ERROR-DRUM READ	START TO READ DRUM 3 MORE TIMES	CHECK SUM STOP IN READING DRUM 2	III-3
624	MACHINE ERROR-DRUM READ	START TO READ DRUM 3 MORE TIMES	CHECK SUM STOP IN READING DRUM 2	III-3
627	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-1
635	MACHINE ERROR	GET OFF MACHINE	TIFGO NOT FOUND AFTER POSITIONING TAPE 2	I PRIME
643	SOURCE PROGRAM	CORRECT SOURCE PROGRAM	TOO MANY DIFFERENT SYMBOLS IN ASSIGNED GO TO,S	IV-2
661	MACHINE ERROR	GET OFF MACHINE	LOOP EXIT FAILED, SECTION 5-1	V-1
665	MACHINE ERROR	GET OFF MACHINE	TAPE CHECK IN READING TIFGO FROM TAPE 2	I PRIME
670	MACHINE ERROR-TAPE READ	START TO READ TAPE 3 MORE TIMES	ERROR IN READING TAPE 2	III-3
701	MACHINE ERROR	PRESS START TO TRY AGAIN	PROBABLY ERROR ON TAPE 2	IV-1
706	SOURCE PROGRAM	RECOMPILE	PROBABLY PART OF PROGRAM THAT CAN,T BE REACHED	IV-2
712	MACHINE ERROR	PRESS START TO REREAD	ERROR READING TAPE 2	IV-1
714	MACHINE ERROR-TAPE READ	START TO READ TAPE 3 MORE TIMES	ERROR IN READING TAPE 3	III-3
733	MACHINE ERROR	PRESS START OR GET OFF	DRUM CHECK SUM STOP, DRUM 2	II
742	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-1 III-1

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
756	SOURCE PROGRAM	CORRECT SOURCE PROGRAM	TOO MANY TRANSFERS TO DO,S SIMPLIFY PROGRAM (POSSIBLY ERROR ON TAPE 4)	IV-2
757	MACHINE ERROR	GET OFF MACHINE	LOOP EXIT FAILED, SECTION 5-1	V-1
1005	MACHINE ERROR	PRESS START OR GET OFF	DRUM CHECK SUM STOP, DRUM 3	II
1024	MACHINE ERROR	GET OFF MACHINE	LOOP EXIT FAILED, SECTION 5-1	V-1
1030	MACHINE ERROR	PRESS START TO REREAD	ERROR - TAPE 4	IV-2
1041	SOURCE PROGRAM	CORRECT SOURCE PROGRAM	TOO MANY ASSIGN,S, SENSE LIGHT, OR TRANSFERS TO DO,S	IV-2
1075	MACHINE ERROR	GET OFF MACHINE	TLQ FAILURE, DRUM 2	II
1123	MACHINE ERROR	PRESS START TO REREAD	ERROR READING DRUM 1	IV-1
1140	MACHINE ERROR	PRESS START OR GET OFF	DRUM CHECK SUM, DRUM 2	II
1145	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-1
1163	MACHINE ERROR	PRESS START TO REREAD	ERROR - TAPE 2	IV-1
1214	MACHINE ERROR	RECOMPILE	PROBABLY ERROR TAPE 2 OR MAYBE ERROR IN PARAMETERS IN DO,S	IV-1
1227	MACHINE ERROR	PRESS START TO TRY AGAIN	FALSE EOF OCCURRED (TAPE 3) IN SECTION 5-1	V-1
1231	MACHINE ERROR	PRESS START OR GET OFF	DRUM CHECK SUM, DRUM 4	II
1236	MACHINE ERROR	PRESS START TO TRY AGAIN	FALSE EOF (TAPE3) IN SECTION 5-1	V-1
1237	MACHINE ERROR	RECOMPILE	PROBABLY ERROR ON TAPE 2 OR MAYBE ERROR IN PARAMETERS IN DO,S	IV-1
1245	MACHINE ERROR	PRESS START TO	REDUNDANCY TAPE CHECK	V-1

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
		TRY AGAIN	(TAPE 3) IN SECTION 5-1	
1353	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-1
1611	MACHINE ERROR-TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-1
1640	MACHINE ERROR	GET OFF MACHINE	LOOP EXIT FAILED, SECTION 5-1	V-1
1647	MACHINE ERROR	GET OFF MACHINE	IMPOSSIBLE DIVIDE CHECK	V-1
2003	MACHINE ERROR	GET OFF MACHINE	LOOP EXIT FAILED, SECTION 5-1	V-1
2023	SOURCE PROGRAM	GET OFF MACHINE	DISPLAY INDEX B	I PRIME

INDEX B MEANING

	MORE THAN 1500 STATEMENT NUMBERS IN SOURCE PROGRAM. SEE P44, PAR1 OF FORTRAN MANUAL
1	MORE THAN 150 DO STATEMENTS (INCLUDING THOSE PRODUCED BY INPUT OUTPUT STATEMENTS) IN SOURCE PROGRAM. SEE P44, PAR4 OF FORTRAN MANUAL
2	THE NUMBER OF ASSIGN STATEMENTS PLUS IF TYPE AND GO TO TYPE STATEMENTS EXCEEDS 300. SEE P44, PAR6 OF FORTRAN MANUAL
3	THE TOTAL NUMBER OF STATEMENT NUMBERS MENTIONED IN ASSIGNED GO TO AND COMPUTED GO TO STATEMENTS EXCEEDS 250. SEE P44, PAR7

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
			INDEX B MEANING	
			OF FORTRAN MANUAL	
			4 THE TOTAL NUMBER OF LITERAL APPEAR- ANCES OF SUB- SCRIPTED VARI- ABLES EXCEEDS 1000 SEE P45, PAR16 OF FORTRAN MANUAL	
			5 THE TOTAL NUMBER OF LITERAL APPEAR- ANCES OF NON-SUB- SCRIPTED FIXED POINT VARIABLES ON THE RIGHT HAND SIDE OF ARITHMETIC FORMULAS AND IN THE ARGUMENT OF IF,S EXCEEDS 750 SEE P45, PAR15 OF FORTRAN MANUAL	
			6 THE NUMBER OF ARITHMETIC FORM- ULAS WHOSE LEFT HAND SIDES ARE NON-SUBSCRIPTED FIXED POINT VARI- ABLES EXCEEDS 500. SEE P45, PAR 14 OF FORTRAN MANUAL	
			7 NUMBERS MENTIONED IN FREQUENCY STATEMENTS EXCEEDS 750. SEE P44, PAR 8 OF FORTRAN MANUAL	
			8 THE NUMBER OF LITERAL APPEAR- ANCES OF VARIABLES IN EQUIVALENCE STATEMENTS EX- CEEDS 750. SEE P44, PAR10 OF FORTRAN MANUAL	
			9 THE NUMBER OF LITERAL APPEAR- ANCES OF FUNCTIONS EXCEEDS 1500. SEE P45, PAR13 OF FORTRAN MANUAL	
			10 TOO MANY CHAR-	

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
			INDEX B MEANING	
			ACTERS MENTIONED IN TOTALITY OF FORMAT STATE-MENTS.	
2037	MACHINE ERROR	GET OFF MACHINE	TAPE CHECK IN READING TET FILE ON TAPE 4	I PRIME
2046	MACHINE ERROR	GET OFF MACHINE	TAPE CHECK IN READING TET FILE ON TAPE 4	I PRIME
*02324	MACHINE ERROR	RESTART PROBLEM OR GET OFF MACHINE AND HAVE ENGINEERS CHECK (CAS), (TLQ) OPER-ATIONS	WHILE SEARCHING DIM3 TABLE, ACC. STORED ARGUMENT SYMBOL IS LESS THAN OR EQUAL TO MQ-STORED TABLE ENTRY SYMBOL (TLQ NOT EXECUTED), BUT SUBSEQUENT CAS INDICATES FORMER GREATER THAN LATTER	I
*02332	SOURCE PROGRAM	GET OFF MACHINE EXAMINE FORM-ULA(S) IN QUES-TION, CORRECT ERROR(S), AND RESTART PROBLEM	3 DIMENSIONAL SUBSCRIPTED VARIABLE USED IN ARITH-METIC, IF OR INPUT-OUT STATEMENT DOES NOT APPEAR IN A DIMENSION SENTENCE	I
*02337	SOURCE PROGRAM	GET OFF MACHINE EXAMINE FORM-ULA(S) IN QUES-TION, CORRECT ERROR(S), AND RESTART PROBLEM	3 DIMENSIONAL SUBSCRIPTED VARIABLE USED IN ARITH-METIC, IF OR INPUT-OUT STATEMENT DOES NOT APPEAR IN A DIMENSION SENTENCE	I
*02346	MACHINE ERROR	RESTART PROBLEM OR HAVE ENGIN-EERS CHECK READING OF RELEVANT PHYSICAL DRUM	CHECK SUM FAILURE AFTER READING DIM3 TABLE ENTRY FROM LGOICAL DRUM 195 INTO C.S.	I
*02350	MACHINE ERROR	RESTART PROBLEM OR HAVE ENGIN-EERS CHECK READING OF RELEVANT PHYSICAL DRUM	CHECK SUM FAILURE AFTER READING DIM3 TABLE ENTRY FROM LOGICAL DRUM 195 INTO C.S.	I
2466	SOURCE PROGRAM	GET OFF MACHINE	A NEST OF DO STATEMENTS CONTAINS TOO MANY TAGS. RE-	II

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
			WRITE SOURCE PROGRAM	
* 2467	MACHINE ERROR	SAME AS FOR 2324	SAME AS FOR 2324, WITH RESPECT TO DIM2 TABLE	I
* 2475	SOURCE PROGRAM	SAME AS FOR 2332	SAME AS FOR 2332, WITH RESPECT TO 2 DIMENSIONAL VARIABLE	I
* 2501	SOURCE PROGRAM	SAME AS FOR 2332	SAME AS FOR 2332, WITH RESPECT TO 2 DIMENSIONAL VARIABLE	I
* 2507	MACHINE ERROR	SAME AS FOR 2346	SAME AS FOR 2346 WITH RESPECT TO DIM2 TABLE	I
* 2511	MACHINE ERROR	SAME AS FOR 2346	SAME AS FOR 2346 WITH RESPECT TO DIM2 TABLE	I
2553	SOURCE ERROR- TABLE SIZE EXCEEDED	REPROGRAM PROBLEM	SIZE OF REGION TABLE EXCEEDS 50 ENTRIES	V-1
2641	MACHINE ERROR	HIT START - IF STOP RECURS, SUBTRACT CONTENTS OF INDEX REGISTER A FROM (3058 TO OBTAIN LOGICAL ADDRESS OF DRUM INVOLVED- ENGINEERS SHOULD DIAGNOSE RELATED PHYSICAL DRUM	CHECK SUM FAILURE WHILE MONITORING SECTION 1 FROM DRUMS	I
2643	MACHINE ERROR	HIT START - IF STOP RECURS, SUBTRACT CONTENTS OF INDEX REGISTER A FROM (3058 TO OBTAIN LOGICAL ADDRESS OF DRUM INVOLVED- ENGINEERS SHOULD DIAGNOSE RELATED PHYSICAL DRUM	CHECK SUM FAILURE WHILE MONITORING SECTION 1 FROM DRUMS	I

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
2751	MACHINE ERROR	GET OFF MACHINE	MISCOMPILED ASSIGNED GO TO IN SECTION 5-4	V-4
3076	MACHINE ERROR	GET OFF MACHINE	IMPOSSIBLE DIVIDE CHECK	V-1
3146	MACHINE ERROR	PRESS START TO REREAD	ERROR - DRUM 1	IV-2
3161	SOURCE PROGRAM	CORRECT SOURCE PROGRAM	FLOW OF PROGRAM TOO COMPLEX (TOO MANY TRA TABLE ENTRIES)	IV-2
3223	MACHINE ERROR	GET OFF MACHINE	MISCOMPILED IF IN SECTION 5-4	V-4
3463	MACHINE ERROR	PRESS START TO TRY AGAIN	REDUNDANCY CHECK (TAPE 4) IN SECTION 5-4	V-4
*03501	SOURCE PROGRAM	GET OFF MACHINE, CORRECT FORMULA IN QUESTION AND RESTART PROBLEM	MIXED ARITHMETIC EXPRESSION ON RIGHT SIDE OF ARITHMETIC FORMULA OR WITHIN SCOPE OF AN IF STATEMENT.	I
*03503	SOURCE	GET OFF MACHINE, CORRECT FORMULA IN QUESTION AND RESTART PROBLEM	MIXED ARITHMETIC EXPRESSION ON RIGHT SIDE OF ARITHMETIC FORMULA OR WITHIN SCOPE OF AN IF STATEMENT	I
*03524	SOURCE PROGRAM	GET OFF MACHINE, CORRECT FORMULA CARD IN QUESTION, AND RESTART PROBLEM	NON-VALID CHARACTER IN FORMULA (0-8-2 PUNCHES)	I
*03534	SOURCE PROGRAM	GET OFF MACHINE, CORRECT FORMULA CARD IN QUESTION, AND RESTART PROBLEM	NON-VALID CHARACTER IN FORMULA (11-8-3 PUNCHES)	I
*03535	SOURCE PROGRAM	GET OFF MACHINE, CORRECT FORMULA CARDIN QUESTION, AND RESTART PROBLEM	NON-VALID CHARACTER IN FORMULA (11-8-2 PUNCHES)	I
*03546	SOURCE PROGRAM	GET OFF MACHINE, CORRECT FORMULA CARD IN QUES-	NON-VALID CHARACTER IN FORMULA (12-8-2 PUNCHES)	I

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
		TION, AND RE-START PROBLEM		
3546	MACHINE ERROR	PRESS START TO TRY AGAIN OR ELSE RESTART	TAPE 202 HAS BEEN READ UNSUCCESSFULLT THREE TIMES (TAPE CHECK)	I
*03553	SOURCE PROGRAM	GET OFF MACHINE, CORRECT FORMULA CARD IN QUESTION, AND RE-START PROBLEM	NON-VALID CHARACTER IN FORMULA (8-4 PUNCHES)	I
* 3624	SOURCE PROGRAM	GET OFF MACHINE CORRECT FORMULA IN QUESTION AND RESTART PROBLEM	NON-ZERO LEVEL REDUCTION DUE TO INSUFFICIENT OR REDUNDANT PARENTHESES IN ARITHMETIC OR IF-TYPE FORMULA	I
*03632	SOURCE PROGRAM	GET OFF MACHINE	TOO MANY RIGHT PARENTHESES	I
*03705	SOURCE PROGRAM	GET OFF MACHINE	NON-ARITHMETIC STATEMENT OF A TYPE WHICH DOES NOT EXIST	I
4007	MACHINE ERROR	GET OFF MACHINE	LOOP EXIT FAILED, SECTION 5-1	V-1
*04043	SOURCE PROGRAM	GET OFF MACHINE, CORRECT FORMULA IN QUESTION AND RESTART PROBLEM	ILLEGITIMATE VARIABLE OR FUNCTION NAME (CONTAINING THE CHARACTER .) APPEARING IN ARITHMETIC OR IF-TYPE FORMULA	I
4155	MACHINE ERROR	PRESS START OR GET OFF MACHINE	TAPE CHECK, TAPE2	II
4160	SOURCE PROGRAM	GET OFF MACHINE	PROGRAM HAS MORE THAN 150 DO FORMULAS	II
4161	MACHINE ERROR	GET OFF MACHINE	TAPE POSITION ERROR, TAPE3	II
4201	MACHINE ERROR	PRESS START OR GET OFF	DRUM CHECK SUM, DRUM 2	II
4220	MACHINE ERROR	PRESS START OF GET OFF	TAPE CHECK, TAPE 2	II
4227	MACHINE ERROR	GET OFF MACHINE	TAPE NOT POSITIONED CORRECTLY-TAPE 4	II

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
4243	MACHINE ERROR	PRESS START OR GET OFF	TAPE CHECK, TAPE 4	II
4252	MACHINE ERROR	GET OFF MACHINE	LOOP EXIT FAILED, SECTION 5-1	V-1
4305	MACHINE ERROR	GET OFF MACHINE	FALSE END OF RECORD (TAPE 4) IN SECTION 5-4	V-4
4313	MACHINE ERROR	GET OFF MACHINE	DUPLICATE INTERNAL F NO. C(ACC)=F NO.	II
4340	MACHINE ERROR	PRESS START TO TRY AGAIN	REDUNDANCY TAPE CHECK (TAPE 4) IN SECTION 5-4	V-4
4405	MACHINE ERROR	GET OFF MACHINE	DUPLICATE INTERNAL FORMULA NUMBER (FORTAG-DOTAG) C(ACC)=OCTAL INTERAL F NO.	II
*04411	SOURCE PROGRAM	GET OFF MACHINE, CORRECT FORMULA IN QUESTION AND RESTART PROBLEM	MORE THAN 50 VARIABLES WRITTEN IN ARGUMENT VECTOR OF A FUNCTION STATEMENT	I
* 4444	MACHINE ERROR	RESTART PROBLEM OR HAVE ENGINEERS DIAGNOSE RELATED PHYSICAL DRUM	CK SUM ERROR ATTEMPTING TO READ FIXCON ENTRY FROM DRUM 194	I
* 4446	MACHINE ERROR	RESTART PROBLEM OR HAVE ENGINEERS DIAGNOSE RELATED PHYSICAL DRUM	CK SUM ERROR ATTEMPTING TO READ FIXCON ENTRY FROM DRUM 194	I
4450	MACHINE ERROR	GET OFF MACHINE	INCORRECT TABLE ENTRY	II
4457	MACHINE ERROR	GET OFF MACHINE	IMPOSSIBLE DIVIDE CHECK	V-1
*04510	SOURCE PROGRAM	GET OFF MACHINE, CORRECT FORMULA IN QUESTION AND RESTART PROBLEM	SUBSCRIPTED SUBSCRIPT	I
* 4511	SOURCE PROGRAM	GET OFF MACHINE, CORRECT FORMULA IN QUESTION AND RESTART PROBLEM	CHARACTER . OCCURS IN SUBSCRIPT	I
4550	MACHINE ERROR	PRESS START OR GET OFF	DRUM CHECK SUM ERROR, DRUM 4	II

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
4570	MACHINE ERROR	PRESS START OR GET OFF MACHINE	CHECK SUM, DRUM READ (DRUM 4)	II
*04573	SOURCE PROGRAM	GET OFF MACHINE, BREAK UP FORMULA IN QUESTION AND RESTART PROBLEM	LAMBDA TABLE SIZE EXCEEDED (TOO LARGE AN ARITHMETIC FORMULA)	I
*04575	SOURCE PROGRAM	GET OFF MACHINE, BREAK UP FORMULA IN QUESTION AND RESTART PROBLEM	BETA TABLE SIZE EXCEEDED (TOO LARGE AN ARITHMETIC FORMULA)	I
*04600	SOURCE PROGRAM	GET OFF MACHINE, BREAK UP FORMULA IN QUESTION AND RESTART PROBLEM	ALPHA TABLE SIZE EXCEEDED (MORE THAN 43 CONSECUTIVE LEVEL NESTS IN FORMULA)	I
4757	MACHINE ERROR	GET OFF MACHINE	DUPLICATE INTERNAL F NO. C(ACC)=F NO.	II
5040	SOURCE PROGRAM	GET OFF MACHINE	A DRUM TABLE IS FULL. REWRITE PROBLEM WITH SIMPLER SUBSCRIPT STRUCTURE	II
5047	MACHINE ERROR	GET OFF MACHINE	TLQ ERROR, DRUM 2	II
*05051	SOURCE PROGRAM	GET OFF MACHINE	DO STATEMENT-WRONG FORMAT	I
*05052	MACHINE ERROR	RESTART		I
* 5053	SOURCE	GET OFF MACHINE	DO STATEMENT-WRONG FORMAT	I
*05054	MACHINE ERROR	RESTART		I
*05055	SOURCE PROGRAM	GET OFF MACHINE	SYMBOL EXCEEDS SIX CHARACTERS	I
*05056	MACHINE ERROR	RESTART		I
*05057	MACHINE ERROR	RESTART		I
*05060	SOURCE PROGRAM	GET OFF MACHINE	GO TO STATEMENT-WRONG FORMAT	I
* 5061	SOURCE PROGRAM	GET OFF MACHINE	THIS IS A TYPE GOTON, () BUT THE N IS NOT FOLLOWED BY A COMMA	I

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
* 5062	SOURCE PROGRAM	GET OFF MACHINE	THIS IS A TYPE GOTON, () BUT THE COMMA IS NOT FOLLOWED BY A PARENTHESIS	I
*.5063	SOURCE PROGRAM	GET OFF MACHINE	THIS IS A TYPE GO TON, () BUT THE RIGHT PARENTHESIS IS MISSING	I
*05064	SOURCE PROGRAM	GET OFF MACHINE	TYPE GO TON, () -WRONG FORMAT	I
* 5065	SOURCE PROGRAM	GET OFF MACHINE	THIS IS A TYPE GO TO (), I BUT THE RIGHT PARENTHESIS IS NOT FOLLOWED BY A COMMA	I
*05066	SOURCE PROGRAM	GET OFF MACHINE	TYPE GO TO (), I- WRONG FORMAT	I
*05067	SOURCE PROGRAM	GET OFF MACHINE	IF STATEMENT-WRONG FORMAT	I
*05070	SOURCE PROGRAM	GET OFF MACHINE	IF STATEMENT-WRONG FORMAT	I
*05071	SOURCE PROGRAM	GET OFF MACHINE	IF STATEMENT-WRONG FORMAT	I
*05072	SOURCE PROGRAM	GET OFF MACHINE	IF STATEMENT-WRONG FORMAT	I
* 5073	SOURCE PROGRAM	GET OFF MACHINE	TYPE IF (SENSE LIGHT) OR IF (SENSE SWITCH) - WRONG FORMAT	I
* 5074	SOURCE PROGRAM	GET OFF MACHINE	TYPE IF (SENSE LIGHT) OR IF (SENSE SWITCH) - WRONG FORMAT	I
*05075	SOURCE PROGRAM	GET OFF MACHINE	TYPE IF (SENSE LIGHT) OR IF (SENSE SWITCH) - WRONG FORMAT	I
*05076	MACHINE ERROR	RESTART		I
*05077	SOURCE PROGRAM	GET OFF MACHINE	TYPE ASSIGN - WRONG FORMAT	I
*05100	SOURCE PROGRAM	GET OFF MACHINE	TYPE ASSIGN - WRONG FORMAT	I
*05101	SOURCE	GET OFF MACHINE	TYPE ASSIGN - WRONG	I

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
	PROGRAM		FORMAT	
*05102	SOURCE PROGRAM	GET OFF MACHINE	TYPE SENSE LIGHT - WRONG FORMAT	I
*05103	SOURCE PROGRAM	GET OFF MACHINE	TYPE DIMENSION- WRONG FORMAT	I
*05104	SOURCE PROGRAM	GET OFF MACHINE	TYPE FREQUENCY - WRONG FORMAT	I
*05105	SOURCE PROGRAM	GET OFF MACHINE	TYPE FREQUENCY - WRONG FORMAT	I
*05106	SOURCE PROGRAM	GET OFF MACHINE	TYPE EQUIVALENCE - WRONG FORMAT	I
*05107	SOURCE PROGRAM	GET OFF MACHINE	TYPE EQUIVALENCE - WRONG FORMAT	I
*05110	SOURCE PROGRAM	GET OFF MACHINE	TYPE EQUIVALENCE - WRONG FORMAT	I
*05111	SOURCE PROGRAM	GET OFF MACHINE	TYPE CONTINUE - WRONG FORMAT	I
*05112	SOURCE PROGRAM	GET OFF MACHINE	TYPE DIMENSION - WRONG FORMAT	I
5112	MACHINE ERROR	PRESS START OR GET OFF MACHINE	DRUM CHECK SUM ERROR; DRUM 2	II
*05113	SOURCE PROGRAM	GET OFF MACHINE	TYPE FREQUENCY - WRONG FORMAT	I
*05114	SOURCE PROGRAM	GET OFF MACHINE	TYPE EQUIVALENCE -WRONG FORMAT	I
*05127	SOURCE PROGRAM	START	ATTEMPT TO USE VARIABLE FORMAT NUMBER	I
*05206	MACHINE ERROR	RESTART PROBLEM OR HAVE EN- GINEERS DIAG- NOSE RELATED PHYSICAL DRUM	CHECK SUM ERROR READING SIGMA2 TABLE ENTRY FROM DRUM 194	I
* 5210	MACHINE ERROR	RESTART PROBLEM OR HAVE EN- GINEERS DIAG- NOSE RELATED PHYSICAL DRUM	CHECK SUM ERROR READING SIGMA2 TABLE ENTRY FROM DRUM 194	I

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
5232	MACHINE ERROR	GET OFF MACHINE	IMPROPER TABLE ENTRY (ADTAG)	II
*05235	MACHINE ERROR	RESTART PROBLEM OR HAVE EN-GINEERS DAIG-PHYSICAL DRUM	CHECK SUM ERROR READING TAU2 TABLE ENTRY FROM DRUM 196	I
*05237	MACHINE ERROR	RESTART PROBLEM OR HAVE EN-GINEERS DIAG-NOSE RELATED PHYSICAL DRUM	CHECK SUM ERROR READING TAU2 TABLE ENTRY FROM DRUM 196	I
5273	SOURCE PROGRAM	GET OFF MACHINE	TABLE FULL,REWRITE PROGRAM WITH SIMPLER DO-SUBSCRIPT COMBINATION STRUCTURE	II
*05311	MACHINE ERROR	RESTART PROBELM OR HAVE EN-GINEERS DIAG-NOSE RELATED PHYSICAL DRUM	CHECK SUM ERROR READING SIGMA1 TABLE ENTRY FROM DRUM 195	I
* 5313	MACHINE ERROR	RESTART PROBLEM OR HAVE EN-GINEERS DIAG-NOSE RELATED PHYSICAL DRUM	CHECK SUM ERROR READING SIGMA1 TABLE ENTRY FROM DRUM 195	I
*05326	MACHINE ERROR	RESTART PROBLEM OR HAVE EN-GINEERS DIAG-NOSE RELATED PHYSICAL DRUM	CHECK SUM ERROR READING TAU1 TABLE ENTRY FROM DRUM 196	I
*05330	MACHINE ERROR	RESTART PROBLEM OR HAVE EN-GINEERS DIAG-NOSE RELATED PHYSICAL DRUM	CHECK SUM ERROR READING TAU1 TABLE ENTRY FROM DRUM 196	I
*05355	MACHINE ERROR	RESTART PROBLEM OR HAVE EN-GINEERS DIAG-NOSE RELATED PHYSICAL DRUM	CHECK SUM ERROR READING SIGMA3 TABLE ENTRY FROM DRUM 193	I
*05356	MACHINE ERROR	RESTART PROBLEM OR HAVE EN-GINEERS DIAG-NOSE RELATED	CHECK SUM ERROR READING TAU3 TABLE ENTRY FROM DRUM 196	I

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
		PHYSICAL DRUM		
* 5531	SOURCE PROGRAM	START	ILLEGAL USE OF FLOATING VARIABLE	I
5560	MACHINE ERROR	PRESS START OR GET OFF MACHINE	CHECK SUM ERROR, DRUM READ (DRUM 1)	II
5566	SOURCE PROGRAM	GET OFF MACHINE	THERE IS A DO FORMULA N DOM WHERE M IS BEFORE N IN THE SOURCE PROGRAM. THE DECREMENT OF THE ACCUMULATOR CONTAINS THE INTERNAL STATEMENT NO. CORRESPONDING TO N. IF N AND M SEEM TO BE PROPERLY ORDERED IN THE SOURCE PROGRAM, CHECK FOR DUP-LICATE M,S.	II
5567	SOURCE PROGRAM	GET OFF MACHINE	THERE IS A DO FORMULA N DOM WHERE M IS BEFORE N IN THE SOURCE PROGRAM. THE DECREMENT OF THE ACCUMULATOR CONTAINS THE INTERNAL STATEMENT NO. CORRESPONDING TO N. IF N AND M SEEM TO BE PROPERLY ORDERED IN THE SOURCE PROGRAM, CHECK FOR DUP-LICATE M,S.	II
5603	SOURCE PROGRAM	GET OFF MACHINE	DIVIDE CHECK IN COMPUTING WITH N,S FOR SOME A DO B I =N(1),N(2),N(3). EXECUTE LDQ 2542(8) TAG A AND C(MQ)=A/B OF OFFENDING DO. (OCT. INT. FORMULA NO.)	II
* 5646	SOURCE PROGRAM	START	MORE THAN SIX CHARACTERS IN SYMBOL	I
5652	SOURCE	GET OFF MACHINE	DO FORMULAS OVERLAP C(ACC)=OCTAL INTERNAL FORMULA NO. OF OFFENDING DO STATEMENT	II
5653	SOURCE PROGRAM	GET OFF MACHINE	DO FORMULAS OVERLAP C(ACC)ADDRESS IS OCT. INTERNAL FORMULA NUMBER OF OFFENDING DO STATEMENT	II

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
5721	MACHINE ERROR	GET OFF MACHINE	DO FORMULA AND IF OR GO TO HAVE SAME INTERNAL STATEMENT NUMBER	II
5742	MACHINE ERROR	GET OFF MACHINE	INCORRECT TABLE ENTRY (TIFGO)	II
5763	MACHINE ERROR	GET OFF MACHINE	INCORRECT TABLE ENTRY (TIFGO)	II
5764	MACHINE ERROR	GET OFF MACHINE	INCORRECT TABLE ENTRY (TIFGO)	II
5771	SOURCE	GET OFF MACHINE	IMPROPER DEFINITION OF SUB SCRIPTS IN A SUBSCRIPT COMBINATION (THIS IS MORE LIKELY TO BE MACHINE ERROR)	II
* 6000	SOURCE PROGRAM	START	MORE THAN THREE LEVELS IN LIST DO	I
6049	SOURCE PROGRAM	GET OFF MACHINE	TRANSFER ADDRESS LEVEL IS GREATER THAN 20. PROGRAM SHOULD BE REWRITTEN WITH SIMPLER DO STRUCTURE (NOT MORE THAN 20, DO,S DEEP)	II
6065	SOURCE PROGRAM	GET OFF MACHINE	THERE IS A TRANSFER OF CONTROL (IF OR GO TO) IN A NEST OF DO,S, A TRANSFER ADDRESS IS INTO SOME DO CONTAINED BY THE DO CONTAINING THE TRANSFER STATEMENT C(6300)=OCTAL INT. STATEMENT NUMBER (IF) C(6303)=OCTAL INT. TRANSFER ADDRESS	II
6202	MACHINE ERROR	GET OFF MACHINE	INCORRECT TABLE ENTRY	II
* 6217	SOURCE PROGRAM	START	NO RIGHT PARENTHESIS AFTER THIRD SUBSCRIPT	I
* 6240	SOURCE PROGRAM	START	SUBSCRIPT ADDEND IS NOT A CONSTANT	I
6240	MACHINE ERROR	GET OFF MACHINE	ERROR CONCERNING DUPLICATE SUBSCRIPT COMBINATIONS	II
* 6243	SOURCE	START	DOUBLE MULTIPLIER FOR SUB-	I

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
	PROGRAM		SCRIPT	
6243	MACHINE ERROR	GET OFF MACHINE	ERROR CONCERNING DUPLICATE SUBSCRIPT COMBINATIONS	II
* 6250	SOURCE PROGRAM	START	SUBSCRIPT MULTIPLIER IS NOT A CONSTANT	I
* 6264	SOURCE PROGRAM	START	DOUBLE ADDEND FOR SUB-SCRIPT	I
* 6267	SOURCE PROGRAM	START	SUBSCRIPT IS NOT A FIXED POINT VARIABLE	I
6326	MACHINE ERROR	START	WRONG CHECK SUM FROM DIM1 TABLE	I
6356	MACHINE ERROR	START	WRONG CHECK SUM FROM DIM2 TABLE	I
6357	MACHINE ERROR	PRESS START OR GET OFF MACHINE	CHECK SUM ERROR, DRUM READ (DRUM 2)	II
6367	MACHINE ERROR-TAPE POSITION-ING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-1
6373	MACHINE ERROR	GET OFF MACHINE	A FLOW SCAN OF DOTAG IS INCORRECT	II
6376	MACHINE ERROR	GET OFF MACHINE	A FLOW SCAN OF DOTAG IS INCORRECT	II
6405	MACHINE ERROR	START	WRONG CHECK SUM FROM DIM3 TABLE	I
6423	MACHINE ERROR	GET OFF MACHINE	A FLOW SCAN OF DOTAG IS INCORRECT	II
6431	SOURCE PROGRAM	GET OFF MACHINE	TOO MANY DO'S END AT SAME FORMULA. REWRITE SOURCE PROGRAM AND SEPARATE DO'S BY USING CONTINUE STATE-MENTS.	II
6432	SOURCE PROGRAM	GET OFF MACHINE	A VARIABLE PARAMETER OF A DO IS REDEFINED BY ANOTHER DO WITHIN THE RANGE OF THE FIRST DO	II
6436	MACHINE ERROR-TAPE POSITION-	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-1

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
	ING			
6462	SOURCE PROGRAM	PRESS START OR GET OFF MACHINE	TABLE FULL, REWRITE WITH SIMPLER DO AND SC STRUCTURE	II
6472	MACHINE ERROR TAPE POSITIONING	GET OFF MACHINE	PROBABLE TAPE POSITIONING ERROR ON TAPE 2	III-1
* 6524	SOURCE PROGRAM	START	ILLEGAL CHARACTER IN I/O SETUP	I
6534	SOURCE PROGRAM	GET OFF MACHINE	TRANSFER ADDRESS LEVEL IS GREATER THAN 20. PROGRAM SHOULD BE REWRITTEN WITH SIMPLER DO STRUCTURE (NOT MORE THAN 20 DO,S DEEP)	II
* 6542	SOURCE PROGRAM	START	ILLEGAL CHARACTER IN I/O LIST	I
6550	MACHINE ERROR	GET OFF MACHINE	TABLE SEARCH PROCEDURE WAS INCORRECT	II
* 6554	SOURCE PROGRAM	START	ILLEGAL CHARACTER IN LIST SUBSCRIPT	I
* 6570	SOURCE PROGRAM	START	ILLEGAL CHARACTER IN CONTROL FOR LIST DO	I
6625	SOURCE PROGRAM	GET OFF MACHINE	NO INSTRUCTIONS COMPILED IN SECTION 1	I PRIME
6635	MACHINE ERROR	GET OFF MACHINE	DUPLICATE INT. FORMULA NUMBERS (DOTAG-FORVAL. C(ACC) = FORMULA NO.)	II
6677	MACHINE ERROR	GET OFF MACHINE	TAPE CHECK IN READING COMPAIL FILE ON TAPE 3	I PRIME
6710	MACHINE ERROR	GET OFF MACHINE	TABLE SEARCH PROCEDURE INCORRECT	II
6717	MACHINE ERROR	GET OFF MACHINE	DIVIDE CHECK IN COMPUTING FLOCON WORD COUNT	I PRIME
6723	SOURCE PROGRAM	GET OFF MACHINE	A DO B I=N(1),N(2),N(3) CONTAINS IN ITS RANGE A STATEMENT N(1)=,OR N(2)=	II

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
			OR N(3)= .	
6736	MACHINE ERROR	GET OFF MACHINE	INCORRECT TAPE POSITION, TAPE 2	II
6737	MACHINE ERROR	GET OFF MACHINE	INCORRECT TAPE POSITION, TAPE 2	II
6744	MACHINE ERROR	PRESS START OR GET OFF MACHINE	INFORMATION MIS-READ FROM TAPE 2	II
6760	MACHINE ERROR	GET OFF MACHINE	CHECK SUM ERROR IN READING FLOCON FROM DRUM 2	I PRIME
6762	MACHINE ERROR	GET OFF MACHINE	CHECK SUM, DRUM READ DRUM 3	II
6765	MACHINE ERROR	PRESS START OR GET OFF MACHINE	CHECK SUM ERROR, DRUM READ (DRUM 3)	II
6767	MACHINE ERROR	PRESS START OR GET OFF MACHINE	TAPE CHECK, TAPE 2	II
7014	MACHINE ERROR	GET OFF MACHINE	DIVIDE CHECK IN COMPUTING DIM1 WORD COUNT	I PRIME
7023	MACHINE ERROR	GET OFF MACHINE	DUPLICATE INTERNAL FORMULA NUMBER (FORVAR-DOTAG, C(ACC) = FORMULA NO.	II
7027	MACHINE ERROR	PRESS START OR GET OFF MACHINE	CHECK SUM ERROR, DRUM READ (DRUM 2)	II
7052	MACHINE ERROR	GET OFF MACHINE	TAPE POSITION ERROR, TAPE3	II
7053	MACHINE ERROR	GET OFF MACHINE	TAPE POSITION ERROR, TAPE3	II
7056	MACHINE ERROR	GET OFF MACHINE	TAPE POSITION ERROR, TAPE3	II
7057	MACHINE ERROR	GET OFF MACHINE	TAPE POSITION ERROR, TAPE3	II
7061	MACHINE ERROR	GET OFF MACHINE	CHECK SUM ERROR IN READING DIM1 FROM DRUM 3 COMPUTED CHECK SUM IN LOCATION (7400)8. READ IN CHECK SUM IN LOCATION (7377)8	I PRIME
7066	MACHINE ERROR	GET OFF MACHINE	DIVIDE CHECK IN COMPUTING DIM2 WORD COUNT	I PRIME
7070	MACHINE ERROR	PRESS START OR	TAPE CHECK, TAPE3	II

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
		GET OFF MACHINE		
7073	MACHINE ERROR	GET OFF MACHINE	DUPLICATE INTERNAL FORMULA NUMBERS	II
7075	MACHINE ERROR	GET OFF MACHINE	TAPE POSITION ERROR, TAPE2	II
7076	MACHINE ERROR	GET OFF MACHINE	TAPE POSITION ERROR, TAPE2	II
7103	MACHINE ERROR	GET OFF MACHINE	TAPE POSITION ERROR, TAPE2	II
7110	MACHINE ERROR	GET OFF MACHINE	A TABLE SORT WAS NOT CORRECT (TAVLE IRV)	II
7112	MACHINE ERROR	GET OFF MACHINE	TAPE POSITION ERROR, TAPE2	II
7123	MACHINE ERROR	PRESS START OR GET OFF MACHINE	TAPE CHECK, TAPE2	II
7133	MACHINE ERROR	GET OFF MACHINE	CHECK SUM ERROR IN READING DIM2 FROM DRUM 3 COMPUTED CHECK SUM IN LOCATION (7402)8. READ IN CHECK SUM IN LOCATION (7401)8	I PRIME
7135	MACHINE ERROR	GET OFF MACHINE	TAPE POSITION ERROR, TAPE2	II
7140	MACHINE ERROR	GET OFF MACHINE	DIVIDE CHECK IN COMPUTING DIM3 WORD COUNT	I PRIME
7211	MACHINE ERROR	GET OFF MACHINE	CHECK SUM ERROR IN READING DIM3 FROM DRUM3 COMPUTED CHECK SUM IN LOCATION (7404)8. READ IN CHECK SUM IN LOCATION (7403)8	I PRIME
7250	MACHINE ERROR	GET OFF MACHINE	TAPE POSITION ERROR, TAPE2	II
7303	MACHINE ERROR	GET OFF MACHINE	DIVIDE CHECK IN COMPUTING SIZ WORD COUNT	I PRIME
7303	SOURCE	GET OFF MACHINE	A TABLE IS FULL. SOURCE PROGRAM HAS TOO MANY DISTINCT PURE RELATIVE CONSTANT SC (TABLE IRV)	II
7334	MACHINE ERROR	GET OFF MACHINE	IMPOSSIBLE DIVIDE CHECK	V-1
7351	MACHINE ERROR	GET OFF MACHINE	IMPOSSIBLE DIVIDE CHECK	V-1

STOP	KIND OF ERROR	WHAT TO DO	DETAILS OF ERROR	SECTION
7361	MACHINE ERROR	GET OFF MACHINE	IMPOSSIBLE DIVIDE CHECK	V-1
7412	SOURCE ERROR-TABLE SIZE EXCEEDED	REPROGRAM PROBLEM	SECTION 5 DRUM TABLES EXCEEDED DRUM SIZE	V-1
7633	SOURCE PROGRAM	GET OFF MACHINE	TABLE IS FULL, REWRITE SOURCE PROGRAM WITH MORE SIMPLE DO-SC STRUCTURE	II
7750	MACHINE ERROR	HIT START-IF STOP RECURS, SUBTRACT CONTENTS OF INDEX REGISTER A FROM (305)8 TO OBTAIN LOGICAL ADDRESS OF DRUM INVOLVED - ENGINEERS SHOULD DIAGNOSE RELATED PHYSICAL DRUM	CHECK SUM FAILURE WHILE WRITING VARIOUS STATES OF SECTION 1 ON DRUMS	I
7751	MACHINE ERROR	PRESS START OR GET OFF MACHINE	CHECK SUM, DRUM READ (DRUM 4)	II
7752	MACHINE ERROR	HIT START - IF STOP RECURS, SUBTRACT CONTENTS OF INDEX REGISTER A FROM (305)8 TO OBTAIN LOGICAL ADDRESS OF DRUM INVOLVED - ENGINEERS SHOULD DIAGNOSE RELATED PHYSICAL DRUM	CHECK SUM FAILURE WHILE WRITING VARIOUS STATES STATES OF SECTION 1 ON DRUMS	I
7760	MACHINE ERROR	PRESS START OR GET OFF MACHINE	CHECK SUM ERROR, DRUM READ (DRUM 1)	II